

the centrifuge rotor and the frame member by being compressed in a respective space of the frame member. The helical spring elements thereby act on a piston movable in the space and abutting the outer wall of a bearing housing. By means of the spring constant of the helical spring elements, a certain stiffness of the known support device is obtained, which together with the resiliency of, for instance, the rotor spindle, determines the critical number of revolutions of the centrifuge rotor. In centrifugal separators, the helical springs of this type have to be dimensioned to the frequently very high stresses and fatigue risks to which they are subjected. The dampening of the radial movements is obtained by means of the friction which arises between the piston and its contact surfaces, in particular the outer wall of the bearing housing. The friction which arises results, in addition to the dampening of the relative movements, also in the generation of heat. Such a heat generation is not desirable and forces the bearing to operate at a relatively high temperature, which reduces the lifetime of the bearing. Another problem is that the arrangement of moving pistons is rather space requiring. Such a space may be difficult to provide for the support device in a centrifugal separator, in particular outside the so-called neetc bearing. In addition, these known support devices have a rather complicated construction, which of course makes the manufacture and the mounting labor demanding and expensive. In addition, it is difficult to conduct heat away from the bearing member.--

Please replace the paragraph at page 3, lines 11-36, with the following rewritten paragraph:

--This object is obtained by the support device initially defined, which is characterized in that each support member comprises a rubber material provided at least in said space and arranged to increase the stiffness of the support member and at the same time to provide a dampening action of the support member. By such a support member, a desired stiffness may be obtained by dimensioning the helical spring elements in combination with the design and choice of hardness of the rubber material. Since the stiffness determines the critical number of revolutions of the centrifuge rotor, one may by this design of the support device obtain a desired critical number of revolutions. A suitable level of the dampening of the relative movements may be obtained by dimensioning the rubber material between the wire rounds of the helical spring element, i.e. the rubber material is, according to the invention, arranged in such a manner that it

has a dampening effect to said relative movements. The incompressible rubber material will thereby be subjected to alternatively compression, expansion and therebetween inhomogeneous loads due to shearing or bending of the helical spring element and the rubber material. By providing a rubber material in this manner in the spaces of the helical spring element, a high stiffness may be obtained by means of smaller helical springs without any risk for overload and or fatigue. The inner friction, which dampens the oscillating movements, generates heat which is uniformly distributed and conducted by the helical spring element. In comparison with previously known, similar support devices, a support device designed in this manner is space saving.--

Please replace the paragraph at page 4, lines 11-17, with the following rewritten paragraph:

--According to a further embodiment of the invention, the wire is manufactured in a spring material, wherein the spring material is fixedly connected to the rubber material. In such a manner, the rubber material is forced to follow the movements of the helical spring element, i.e. the dampening of the rubber material is acting continuously. Thereby, the spring material may advantageously be fixedly connected to the rubber material by vulcanization.--

Please replace the paragraph at page 7, lines 7-9, with the following rewritten paragraph:

--In all embodiments according to Figs 4-10, the resilient material of the wire is fixedly connected to the rubber material 12, preferably through a vulcanization process.--

In the claims:

Please amend claims 1 and 6, as follows (for easy reference, unamended claims 2-5 and 7-10 are set forth below in smaller type):

--1. (Twice Amended) A support device for supporting a spindle (1) carrying a centrifuge rotor (4) of a centrifugal separator and being provided in a frame member (7) by means of a bearing member (3) to be rotatable about an axis (x) of rotation.